

**IN THE CLAIMS:**

Please substitute the following claims for the same-numbered claims in the application:

1. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

acquiring a waveform of data for a critical dimension structure;

determining a stepper focus parameter for said critical dimension structure;

calculating an approximate critical dimension measurement for said critical dimension structure;

calibrating said data of said waveform by determining best fit data parameters for improving a linearity of said waveform;

combining said stepper focus parameter with [[a]] said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes to remove structural bias parameters from said approximate critical dimension information measurement;  
and

generating said optimum critical dimension value from said combining.

2. (Previously Presented) The method of claim 1, wherein said determining comprises:  
navigating to a stepper focus monitor target;  
performing a scanning electron microscope focusing; and  
performing a final alignment of said target.

3. (Currently Amended) The method of claim 2, wherein said determining further

comprises:

acquiring [[a]] the waveform data;  
analyzing said waveform data; and  
determining said stepper focus parameter based on said analyzing.

4. (Previously Presented) The method of claim 2, wherein said determining further comprises:

acquiring an image data;  
analyzing said image data; and  
determining said stepper focus parameter based on said analyzing.

5. (Currently Amended) The method of claim 1, wherein said generating comprises:  
navigating to [[a]] said critical dimension structure;  
performing a scanning electron microscope focusing; and  
performing a final alignment of said critical dimension structure.

6. (Currently Amended) The method of claim 5, wherein said generating further comprises:  
acquiring [[a]] the waveform data;  
analyzing said waveform data; and  
determining said optimum critical dimension value based on said analyzing.

7. (Previously Presented) The method of claim 5, wherein said generating further comprises:

acquiring an image data;  
analyzing said image data; and  
determining said optimum critical dimension value based on said analyzing.

8. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

generating a scanning electron microscope focus;  
generating a waveform data based on output from said scanning electron microscope focus;

analyzing said waveform data to determine ~~[[a]]~~ an approximate critical dimension measurement;

calibrating said waveform data by determining best fit data parameters for improving a linearity of said waveform data;

analyzing said waveform data to determine a stepper focus parameter;  
combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes to remove structural bias from said approximate critical dimension information measurement; and  
generating said optimum critical dimension value from said combining.

9. (Previously Presented) The method of claim 8, wherein said generating a waveform data further comprises:

navigating to a critical dimension structure;  
performing a scanning electron microscope focusing;

performing a final alignment of said critical dimension structure; and  
acquiring said waveform data based on said scanning electron microscope focusing and  
said final alignment.

10. (Currently Amended) A method of producing an optimum critical dimension value, said  
method comprising:

generating a scanning electron microscope focus;  
generating an image data based on output from said scanning electron microscope focus;  
analyzing said image data to determine ~~[[a]]~~ an approximate critical dimension  
measurement;

calibrating said image data by determining best fit data parameters for improving a  
linearity of said image data;

analyzing said image data to determine a stepper focus parameter;  
combining said stepper focus parameter with said approximate critical dimension  
measurement and said best fit data parameters, wherein said combining removes to remove  
structural bias from said approximate critical dimension ~~information~~ measurement; and  
generating said optimum critical dimension value from said combining.

11. (Previously Presented) The method of claim 10, wherein said generating an image data  
further comprises:

navigating to a critical dimension structure;  
performing a scanning electron microscope focusing;  
performing a final alignment of said critical dimension structure; and

acquiring said image data based on said scanning electron microscope focusing and said final alignment.

12. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

acquiring data representative of a critical dimension structure;

determining a stepper focus parameter for said critical dimension structure;

measuring [[a]] an approximate critical dimension measurement for said critical dimension structure;

calibrating said data by determining best fit data parameters for improving a linearity of said data;

combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes to remove structural bias parameters from said approximate critical dimension information measurement; and

generating said optimum critical dimension value based on said combining.

13. (Previously Presented) The method of claim 12, wherein said determining comprises:

navigating to a stepper focus monitor target;

performing a scanning electron microscope focusing; and

performing a final alignment of said target.

14. (Previously Presented) The method of claim 13, wherein said determining further

comprises:

acquiring a waveform data;  
analyzing said waveform data; and  
determining said stepper focus parameter based on said analyzing.

15. (Previously Presented) The method of claim 13, wherein said determining further comprises:

acquiring an image data;  
analyzing said image data; and  
determining said stepper focus parameter based on said analyzing.

16. (Currently Amended) The method of claim 12, wherein said generating comprises:

navigating to [[a]] said critical dimension structure;  
performing a scanning electron microscope focusing; and  
performing a final alignment of said critical dimension structure.

17. (Previously Presented) The method of claim 16, wherein said generating further comprises:

acquiring a waveform data;  
analyzing said waveform data; and  
determining said optimum critical dimension value based on said analyzing.

18. (Previously Presented) The method of claim 16, wherein said generating further

comprises:

- acquiring an image data;
- analyzing said image data; and
- determining said optimum critical dimension value based on said analyzing.

19. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

- acquiring data representative of a critical dimension structure;

- determining a stepper focus parameter for said critical dimension structure;

- measuring [[a]] an approximate critical dimension measurement for said critical dimension structure;

- calibrating said data by determining best fit data parameters for improving a linearity of said data;

- combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes to remove structural bias parameters from said approximate critical dimension information measurement;
- and

- generating said optimum critical dimension value based on said combining;

- wherein said determining further comprises:

- navigating to a stepper focus monitor target;

- performing a scanning electron microscope focusing at said target;

- performing a final alignment of said target based on said scanning electron microscope focusing at said target;

acquiring a first data set from said scanning electron microscope focusing;  
analyzing said first data set; and  
determining said stepper focus parameter based on said analyzing;  
wherein said generating further comprises:  
navigating to [[a]] said critical dimension structure;  
performing a scanning electron microscope focusing at said critical dimension  
structure;  
performing a final alignment of said critical dimension structure;  
acquiring a second data set from said scanning electron microscope focusing at  
said critical dimension structure;  
analyzing said second data set; and  
determining said optimum critical dimension value based on said analyzing.

20. (Currently Amended) A program storage device readable by a computer, tangibly embodying a program of instructions executable by the computer to perform a method of producing an optimum critical dimension value, said method comprising:

acquiring a waveform of data for a critical dimension structure;  
determining a stepper focus parameter for said critical dimension structure;  
calculating an approximate critical dimension measurement for said critical dimension structure;  
calibrating said data of said waveform by determining best fit data parameters for improving a linearity of said waveform;  
combining said stepper focus parameter with [[a]] said approximate critical dimension



measurement and said best fit data parameters, wherein said combining removes ~~to remove~~ structural bias parameters from said approximate critical dimension information measurement; and  
generating said optimum critical dimension value from said combining.

21. (Previously Presented) The program storage device of claim 20, wherein in said method said determining comprises:

navigating to a stepper focus monitor target;  
performing a scanning electron microscope focusing; and  
performing a final alignment of said target.

22. (Currently Amended) The program storage device of claim 21, wherein in said method said determining further comprises:

acquiring ~~[[a]] the~~ waveform data;  
analyzing said waveform data; and  
determining said stepper focus parameter based on said analyzing.

23. (Previously Presented) The program storage device of claim 21, wherein in said method said determining further comprises:

acquiring an image data;  
analyzing said image data; and  
determining said stepper focus parameter based on said analyzing.

24. (Currently Amended) The program storage device of claim 20, wherein in said method said generating comprises:

- navigating to [[a]] said critical dimension structure;
- performing a scanning electron microscope focusing; and
- performing a final alignment of said critical dimension structure.

25. (Currently Amended) The program storage device of claim 24, wherein in said method said generating further comprises:

- acquiring [[a]] the waveform data;
- analyzing said waveform data; and
- determining said optimum critical dimension value based on said analyzing.

26. (Previously Presented) The program storage device of claim 24, wherein in said method said generating further comprises:

- acquiring an image data;
- analyzing said image data; and
- determining said optimum critical dimension value based on said analyzing.